Meeting Notes	Department of Health ***SRDC IAQ Workgroup*** Burien, Washington *March 8, 2005*

Facilitator:	Tim Hardin	Note Taker(s):	Nancy Bernard
Attendees:	Vern Enns, HBB Eng; Janice Doyle, SNOW; Denise Frasino, Teacher; Bob Miksch, IEH; John Wolpers, EHD, Kittitas HD; Mark Cooper, parent; James Green, community; Art Busch, WEA-Midstate; Carol Jones, Peninsula SD; Mike Gawley, WEA; Ken Wilson, TSD; Don Leaf, WSEHA; Scott LaBar, ESD 112; Carly LaPlant, student; Mary Senn, student; Steve Main, SRHD; Eric Dickson, ESD 101; June Sine, WSSDA, Claire Olsovsky, IEH; Maria Mason, Coalition for Environmentally Safe Schools; Dave DeLong, TPCHD; Pete Keithley, Building Commissioning Assn.; Dr. Daniel Salzer, Toxic Mold Recovery Center; Jennifer Aspelund, SPS parent, Paul Clark, MLSD; Candi Wines, SBOH; Tim Hardin, DOH, Mark Soltman, DOH,		
Absent:	Brenda Hood, OSPI Mike Currie, Bainbridge SD Thelma Simon, parent	Guests:	Harriet Ammann, Senior Toxicologist, Dept. of Ecology

AGENDA ITEMS	DISCUSSION
Introductions Review of information Review of agenda	Corrections to summary notes from 2-15-05 -Correct date. -Accommodations for 504 students left out of minutes. -Papers submitted by Dr. Salzer need to be mentioned in the minutes. -Vern Enns left off attendees.
ACTION	
Presentation by Dr. Ammann on mold, Q&A	Vice-chair, ACGIH, bio-aerosols committee, Institute of Medicine Damp Indoor Air & Health Committee, asked by CDC to examine existing literature on mold and damp indoor spaces. The workgroup discussed: • General overview of mold health effects and limitations of testing. o Measuring for molds is itself difficult o Sampling is unreliable and should be considered a diagnostic tool not for the purpose of determining an exposure o The exposure of people to biological material is a public health issue o The fact that the spores may not be the primary problem for exposure and that the fragments may be a more problematic exposure o Limits set for industry do not apply to this venue o Children represent a unique situation when exposed • General statement that damp spaces are not healthy spaces and that of all the parameters we can measure in a building that dampness and moisture in a building are the most closely associated with health symptoms. • Limitations of only approaching visible mold and the problems associated with this approach. • In general dry well maintained buildings will not have a mold problem. o Removing the biological materials and maintaining a clean dry space are easily achieved and effective means of addressing this issue o That building issues need to be addressed in a timely fashion by personnel with the appropriate training and experience o Moisture meters are a useful tool for assessing the potential for mold growth • Flaws in siting and design can contribute to water intrusion of moisture build up and then lead to mold growth. • Keep buildings clean and dry. Much more cost effective than testing and it will help avoid health and structural problems.
ACTION	**Postpone further mold discussion until next meeting so that Dr. Ammann can review and comment.**

AGENDA ITEMS	DISCUSSION
Decision Agenda Mark's Introduction	A way in which this group can begin to identify where we have agreement and the level of that agreement. Will go forward as a recommendation to the SRDC or as an item that was discussed but may not have generated enough support to be a recommendation. Will vote on each proposal twice – once on support for putting it into rule, once for support for putting it into guidance. Voting: 23 total. Need to have been here for discussion. 12 for simple majority, 16 for 2/3rds. The work group voted on the ventilation portion of the decision agenda.
Discussion: Ventilation	The workgroup discussed: • WAC 51-13 • ASHRAE 62.1 2004 and the IBC • The role that these play in how we build schools. • The practical reality of codes and the revision process. • Whether guidance of regulation is more effective or cumbersome in accomplishing the goals of the group. • Recommendation that the measurements should be done by qualified, trained people. • Suggested DOH develop testing/sampling protocol. Are they performing as designed? • CO2 only an assessment tool. CO2 – strictly a measurement of the effectiveness of the ventilation system. • WAC 51-13 does differentiate different types of systems. • Testing for CO_2 and humidity are indicators, not determinants of the health of the environment. • Want VOCs, etc. in a guidance document flow chart.
ACTION	Reviewed & discussed various proposals, amending some and adding others. See following pages for summary of Proposals.
Discussion: Temperature Proposal A: Draft	The workgroup discussed: • ASHRAE 55-2004. • Summer (cooling) 73^o-79^o, winter (warming) 68^o-75^o. • Washington Sustainable School Protocol: difference for mechanical vs. natural ventilation. • These numbers should be easily attainable for new/remodeled. Existing buildings will have difficulty meeting this standard. Recommend that the standards for temperature in mechanically ventilated school facilities be consistent with temperature range standards for heating (68^o -75^o F) and cooling (73^o -79^o F) in ASHRAE 55-2004. In non-mechanically ventilated schools, temperature standards for heating maintain a minimum temperature of 65^o F except for gymnasiums which shall be maintained at a minimum temperature of 60^o F.
ACTION	Discussion on temperature did not lead to voting on proposals. Need to do more research on the parameters here. Asked for feedback on remaining current proposals prior to the next meeting. May need to limit discussion to finish.
NEXT MEETING	
March 29th, 2005	

Decision Agenda for: MARCH 8, 2005	Number Present: 23	
	50% +1= 12	Two Thirds = 16

Topic	**Ventilation**
Problem Statement	The existing SBOH rule (Chapter 246-366 WAC) states: "All rooms used by students or staff shall be kept reasonably free of all objectionable odor, excessive heat or condensation. All sources producing air contaminants of public health importance shall be controlled by the provision and maintenance of local mechanical exhaust ventilation systems as approved by the health officer." Ventilation provides an effective means of controlling contaminants that are generated by processes and pollutants used in the school environment. Properly ventilated spaces will also minimize the spread of communicable disease in the school setting. There is a growing body of evidence that adequately ventilated spaces have a positive impact on student absenteeism and productivity. School facilities present unique challenges for ventilation systems, with internal spaces that are often subject to a wide range of occupancies, such as gymnasiums, or dedicated instructional areas, such as band & choir rooms or automotive & carpentry shops. Special use areas, such as the health room, present their own particular demands on ventilation systems. Ventilation standards for design and performance exist for public and private buildings. Chapter 51-13 WAC and the ASHRAE 62.1 2004 are examples of commonly use standards-of-practice in the field of ventilation. These standards typically address the methods and materials used in ventilation systems, as well as performance requirements. Maintenance and repair of ventilation systems is a critical element to assure on-going performance. Assessment of on-going functional performance is an integral part of plant maintenance. School maintenance staff and processes would benefit from the identification of effective and economical approaches to assessing ventilation system performance.
Reference / Research	WAC 246-366, WAC 51-13 and ASHRAE 62.1 2004

		Proposal In?	Workgroup Vote		
			GRN	YEL	RED
Proposal A:	**Recommend that the standards for ventilation system design, construction, installation and performance in school facilities be consistent with those established in Chapter 51-13 WAC.**	**Rule**	20	1	2
		Guidance	6	9	8
Proposal B:	**Recommend the use of CO_2 measurement in occupied spaces as a means of assessing ventilation system performance, as part of an on-going facility operation & maintenance program by trained and qualified personnel.**	**Rule**	10	4	9
		Guidance	14	2	7
Proposal C:	**Recommend that the standards for ventilation system design, construction, installation and performance in school facilities address the unique needs presented by special use areas, such as health rooms, and career & technical instructional areas.**	**Rule**	18	5	0
		Guidance	8	6	9

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		Proposal In?	Workgroup Vote		
			GRN	YEL	RED
Proposal D:	**Recommend that DOH update guidance regarding ventilation systems to include references to the current ASHRAE 62.1.**	**Rule**	21	2	0
		Guidance	No Vote		
Proposal E:	**Recommend that DOH develop or update guidance on the use of CO_2 measurement in occupied spaces as a means of assessing ventilation system performance, as part of an on-going facility operation & maintenance program by trained and qualified personnel.**	**Rule**	No Vote		
		Guidance	No Vote		
Proposal F:	**Recommend the use of CO_2 measurement in occupied spaces as a means of assessing ventilation system performance, as part of an on-going facility operation & maintenance program by trained and qualified personnel. CO_2 levels greater than 700 ppm over ambient level is a threshold level for further evaluation of ventilation system performance.**	**Rule**	11	10	2
		Guidance	11	3	9